

## ABSTRACT

The invention relates to a location method based on distance measurements. In such methods the distance between a mobile station and a base station is measured by finding the one-way propagation time between the two radio stations. This one-way propagation time is obtained by sending a location signal and measuring the time of arrival of said location  
5 signal.

The problem is that the signals which are detected at the receiving station and which are used for such measurements often correspond to reflected radio paths which are longer than direct radio paths. This results in an inaccurate position.

The invention proposes a method to ensure that the distance calculation will be  
10 done by using the first time of arrival of the location signal, said first time of arrival corresponding to a propagation through the shortest radio path which is likely to be the direct path.

This is achieved by using a location signal which includes a plurality of identical messages, and by combining said messages on reception in order to obtain a signal  
15 of higher energy of which the shortest path is detected.

Reference: figure 3.